

Attachment E
NINE MINIMUM CONTROLS
DOCUMENTATION AND IMPLEMENTATION GUIDANCE

The following guidance is for communities preparing documentation to demonstrate adequate implementation of the nine minimum technology based control measures for combined sewer overflows. For further information see *Combined Sewer Overflows: Guidance for Nine Minimum Controls* (EPA MAY 1995)(EPA 832-B-95-003).

EPA has made a Best Professional Judgement (BPJ) determination that adequate implementation of technology based requirements, Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants, and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants, must include implementation of the nine minimum controls.

Documentation Requirements

Documentation should provide sufficient information to demonstrate:

- that alternatives were considered for each of the nine minimum control measures.
- the reasoning for the alternatives that were selected.
- that the selected alternatives have been implemented.
- that the permittee has developed a schedule for actions that have been selected but not yet fully implemented.

Nine Minimum Controls (NMC)

The following is a summary of specific information which must be included in the documentation of each of the NMCs.

- 1. Proper operation and regular maintenance programs for the sewer system and combined sewer overflow points.**

- a. An organizational chart showing the staff responsible for operation and maintenance (O&M) of the combined sewer system. Document that organization and staffing levels are adequate.
- b. The funding allocated for O&M of the combined sewer system. Document that funding is adequate.
- c. A list of facilities and structures that are critical to the performance of the combined sewer system, including all regulators, tide gates, pumping stations, and sections of sewer lines which are prone to sedimentation or obstruction. Include an inspection plan which identifies the locations, frequency, procedures, documentation, and reporting of periodic and emergency inspections and maintenance. Document that these facilities are adequately operated and maintained.
- d. A summary of safety training and equipment provided to inspection and maintenance personnel. For instance, workers entering sewers must be trained and equipped for confined space entry. Document that training listed is adequate.
- e. A summary of technical training and maintenance equipment provided to inspection and maintenance personnel. Document that training and equipment are adequate to maintain the facilities identified in item 1.c. above.

2. Maximum Use of the Collection System for Storage

- a. Collection system inspection: This should focus on the identification of maintenance or design deficiencies that restrict the use of otherwise available system capacity. This evaluation should document that inadequate regulators, piping bottlenecks, and pumping deficiencies have been identified and corrected, or scheduled for correction. Where increased inspection and/or maintenance is proposed, this shall be reflected in the inspection plan required in item 1.c.

- b. Tide gate maintenance and repair: Tide gates prevent significant volumes of water from entering the conveyance system, thereby freeing up system storage capacity during wet weather periods. Where appropriate, document that tide gate maintenance and repair procedures are adequate.
 - c. Adjustment of regulator settings: Adjustment of regulating devices can increase in-system storage of CSO flows and maximize transport to the POTW. Care should be taken to ensure that the regulator adjustment will not result in unacceptable surcharging of the system. Document that regulators have been adjusted to optimum settings. The method by which the community determined the optimum regulator setting (e.g. modeling, trial and error) shall be included in the documentation.
 - d. Removal of obstructions to flow: Document that accumulations of debris which may cause flow restrictions are identified, and debris is removed routinely. Documentation shall include a summary of the locations where sediment is removed, the number of times each year the sediment is removed and the total quantity of material removed each year.
3. **Review and Modification of the Industrial Pretreatment Program to assure CSO impacts are minimized.**
- a. Review legal authority: Review the community's legal authority (i.e. pretreatment program, sewer use ordinance) to regulate non domestic discharges to its collection system. Identify those activities for which the community has or can obtain legal authority to address CSO induced water quality violations. For example, does the community have legal authority to require non domestic dischargers to store wastewater discharges during precipitation events or can the community require non domestic dischargers to implement runoff controls?

- b. Inventory non domestic dischargers: Identify those non domestic discharges that may, through quantity of flow or pollutant concentration or loadings, contribute to CSO induced water quality violations,
- c. Assess the significance of identified dischargers to CSO control issues: Assess whether the identified non domestic sources cause or contribute to CSO induced water quality standards by using monitoring, dilution calculations or other reasonable methods.
- d. Evaluate and propose feasible modifications: Identify, evaluate, and propose site-specific modifications to the pretreatment program which would address the non domestic dischargers identified as significant. Modifications which shall be considered include;
Volume-related controls: Document that detaining wastewater flows (sanitary, industrial, and/or storm water) within the industrial facility until they can be safely discharged to the POTW for treatment was considered and implemented where reasonable.

Pollutant Load-related controls: Document that reduction of concentrations of pollutants that enter the collection system during storm periods was considered and implemented where reasonable. Methods to be considered for reducing pollutant concentrations from storm water runoff controls include structural and non-structural controls such as covering material storage areas, reducing impervious area, detention structures, and good housekeeping.

4. Maximization of flow to the POTW for treatment

It is recognized that most of the actions recommended for maximization of the collection system for storage will also serve to maximize flow to the POTW. In addition to optimizing those controls to maximize flow to the POTW, the following specific controls should be evaluated and implemented where possible;

- a. Use of off-line or unused POTW capacity for storage of wet weather flows.
- b. Use of excess primary treatment for treatment of wet weather flows. If the use of excess primary capacity will result in violations of the community's NPDES permit limits, the community shall get approval of the proposed bypass from the permitting authority prior to implementation.

5. Prohibition of CSO discharges during dry weather

- a. Document that the community's monitoring and inspections are adequate to detect and correct dry weather overflows(DWOs)in a timely manner.
- b. Document that DWOs due to inadequate sewer system capacity have been eliminated. If elimination is scheduled but not yet completed, the documentation shall include the schedule.
- c. Document that DWOs due to clogging of pipes and regulators or due to other maintenance problems have been eliminated to the maximum extent practicable. Increased inspection and maintenance of problem areas must be considered as well as modification or replacement of existing structures.

6. Control of Solid and Floatable Material in CSO Discharges

Document that low cost control measures have been implemented which reduce solids and floatables discharged from CSOs to the maximum extent practicable. Alternatives which shall be considered include;

- a. baffles in regulators or overflow structures.
- b. trash racks in CSO discharge structures.
- c. static screens in CSO discharge structures.

- d. catch basin modifications.
- e. end of pipe nets.
- f. outfall booms (on surface of receiving water)

7. Pollution prevention programs that focus on contaminant reduction activities.

- a. Prevention: through public education or increased awareness. For example, a water conservation outreach effort could result in less dry weather sanitary flow to the POTW and an increase in the volume of wet weather flows that can be treated at the POTW.
- b. Control of disposal: through the use of garbage receptacles, more efficient garbage collection, or again, through public education.
- c. Anti-litter campaigns: Campaigns through public outreach and public service announcements can be employed to educate the public about the effects of littering, overfertilizing, pouring used motor oil down catch basins, etc.
- d. Illegal dumping: Programs such as law enforcement and public education can be used as controls for illegal dumping of litter, tires, and other materials into water bodies or onto the ground. Free disposal of these products at centrally located municipal dump sites can also reduce the occurrence of illegal dumping.
- e. Street cleaning
- f. Hazardous waste collection days: Communities are encouraged to schedule one or two days a year where household hazardous wastes can be brought to a common collection area for collection and environmentally safe disposal.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.

The objective of this control element is to ensure that the public receives adequate notification of CSO impacts on pertinent water use areas. Of particular concern are beach and recreational areas that are affected by pollutant discharges in CSOs.

Where applicable, the permittee shall provide users of these types of areas with a reasonable opportunity to inform themselves of the existence of potential health risks associated with the use of the water body (bodies). The minimum control level, found in Section C.2.f. of the permit is posting of CSO discharge points.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

As stated in the permit, in Section C.2.f. the minimum requirement is quantification and recording at the outfall. If possible, the permittee shall initiate monitoring, measuring and/or inspection activities above and beyond the minimum control levels specified in the permit. The purpose of these additional monitoring and/or inspection events is to better characterize quality of the CSOs and their impacts on all receiving waters. Examples of such events include CSO monitoring or receiving water monitoring for pollutants of particular concern.